injecting ammonia into the flue gas prior to introducing the gas into an absorption tower, wherein the amount of ammonia is injected in such a quantity that an excessive level of ammonia or an ammonium salt will remain in the flue gas when the flue gas is subsequently contacted with an absorbing fluid;

introducing the flue gas into an absorption tower; and

desulfurizing the flue gas in the absorption tower by contacting the flue gas with the absorbing fluid, wherein the absorbing fluid absorbs sulfur oxides.

10. A flue gas treating process according to claim 9, wherein the amount of ammonia injected is at a concentration so that the amount of ammonia remaining in the flue gas after the injection step will be not less than 30 ppm.

11. A flue gas treating process according to claim 10, wherein the flue gas discharged into the environment has been denitrated by about 90%.

12. A flue gas treating process according to claim 9, further comprising:

introducing the flue gas leaving the denitration step into a heat exchanger on the upstream side of the absorption tower.

13. A flue gas treating process according to claim 12, wherein the heat exchanger is a non-leakage shell-and-tube heat exchanger.

14. A flue gas treating process according to claim 13, further comprising:

recovering heat from the flue gas; and

heating the flue gas leaving the absorption tower to a temperature favorable for emission into the atmosphere by using at least a part of the heat recovered in the heat exchanger.

15. A flue gas treating process according to claim 9, wherein the amount of ammonia injected is at a concentration so that the concentration of ammonia remaining in the flue gas when introduced into the heat exchanger will be in excess of the SO_3 concentration by 13 ppm or more.

16. A flue gas treating process according to claim 12, wherein the amount of ammonia injected is at a concentration so that the concentration of ammonia remaining in the flue gas introduced when injected into the heat exchanger will be in excess of the SO_3 concentration in the flue gas by 13 ppm or more.

17. A flue gas treating process according to claim 15, wherein the denitrator does not have an ammonia decomposition catalyst.

18. A flue gas treating process according to claim 9, further comprising:

spraying the flue gas with a liquid having a lower pH than the absorbing fluid, wherein the spraying is done downstream of the desulfurization step and in the absorption tower.

19. A flue gas treating process according to claim 18, wherein the pH of the absorbing fluid is about 6.0 and the pH of the downstream liquid is from about 4.0 to about 5.0.

20. A flue gas treating process according to claim 9, further comprising:

removing dust of the flue gas upstream of the absorption tower with a dry electrostatic precipitator, wherein the dry electrostatic precipitator is downstream of the ammonia injection.

21. A flue gas treating process according to claim 9, further comprising:

removing dust of the flue gas downstream of the absorption tower with a wet electrostatic precipitator.

22. A flue gas treating process according to claim 20, further comprising:

removing dust of the flue gas downstream of the absorption tower with a wet electrostatic precipitator.

23. A flue gas treating process according to claim 9, wherein ammonia is injected into the flue gas at a point downstream of the denitrator.

24. A flue gas treating process according to claim 9, wherein ammonia is injected into the flue gas in the denitrator.

25. A flue gas treating process according to claim 9, wherein the absorbing fluid comprises 150 mmol/liter or more ammonium ion.

26. A flue gas treating process according to claim 25, wherein the absorbing fluid absorbs about 95% of the sulfur oxides.

27. A flue gas treating process according to claim 14, further comprising:

heating the flue gas leaving the absorption tower to a temperature favorable for emission into the atmosphere by using at least a part of the heat recovered in the heat exchanger; and

pressurizing the flue gas with a fan, wherein pressure loss in the absorption tower or reheating section is counter acted.

28. A flue gas treating process according to claim 27, wherein the absorption tower, the reheating section and the fan comprise a stack and are arranged together on a vertical axis.